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OPEN-001 (was PA1516US)***In the Specification:*****Please replace the bottom paragraph of page 1 with:**

The invention relates generally to the field of data management and more particularly to managing data related to bills of material on a computer network.

**Please replace the first paragraph of page 2 with:**

During development and manufacturing of a product, elements, parts or components of the product are often kept in a structured item list called a bill of materials (hereinafter BOM, while the plural form, bills of material, is abbreviated as BOMs). For each such product, a BOM is used to keep track of information such as the number of parts used in manufacturing the product, the identification of parts, part vendors, and part costs. The BOM may also be used as an index or organizational tool for the documentation of a product's components such as component datasheets and mechanical drawings. Furthermore, in some instances BOMs include non-material elements such as assembly and finishing processes, machining steps, and connections. Finally, BOMs may include reference items such as tooling or agency certifications which are not actually included in the product itself, but which are required for its manufacture.

**Please replace the paragraph starting page 16, line 30 and ending on page 17, line 8 with:**

FIG. 3 shows one aspect of the invention, an owner list data structure 300 of data owner list 205, which includes a plurality of data records 302 (rows) and typically includes more data records 302 than are illustrated in FIG. 3. Each data record 302 includes several data fields 304, including a unique owner identifier data field 310 of which the contents are required to be unique with respect to all other data records 302, and can therefore be used to index and uniquely reference any particular data record 302 within the namespace of RDBMS 210. Thus, unique owner identifier data field 310 is a primary key for owner list data structure 300. Owner list data structure 300 optionally includes other data fields 320.

**Please replace the paragraph starting page 17, line 17 and ending on page 18, line 2 with:**

FIG. 4 shows a user list data structure 400 of user list 208. User list data structure 400 includes a plurality of data records 402 (rows), typically more than in FIG. 4, each including several data fields generally designated 404. User list data structure 400 includes an owner data field 410 and a unique user identifier 425. For each data record 402, the contents of owner data field 410 are required to match the contents of unique owner identifier data field 310 in one and only one owner list data record 302. That is, owner data field 410 references unique owner identifier data record 310 as a foreign key. In addition, for each data record 402, the contents of unique user identifier data field 425 are a primary key for user list data structure

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400 within the namespace of RDBMS 210. In addition, user list data structure 400 may optionally include other data fields 430 such as user name data field 433 and user password data field 436. Additional data fields 440 are optionally added to user list data structure 400 as desired.

**Please replace the paragraph starting page 20, line 24 and ending on page 21, line 4 with:**

Various applications of this method will be apparent to those skilled in the art. For example, element relations list data structure 600 optionally includes other data fields 630 in addition to element parent data field 620 and element child data field 625. In an aspect of the invention, other data fields 630 include child quantity data field 626, which contains a number indicating how many of the child BOM elements are included in each of the parent BOM elements. The contents of other data fields 630 are preferably specified by users of the invention. Typically, element list data structure 600 will include more data fields 630 in addition to those shown. Also shown in FIG. 6 is optional workspace context data field 615, the purpose of which is explained below.

**Please replace the paragraph starting page 21, line 22 and ending on page 22, line 8 with:**

FIG. 7 is an illustration of a generalized data structure 700 according to another aspect of the invention. Generalized data structure 700 includes a plurality of data records 702 (rows) and typically includes more data records 702 than are shown in FIG. 7. Each data record 702 includes several data fields generally designated 704. Generalized data structure 700 includes a primary key data field 705 and an owner data field 710. Primary key data field 705 is a primary key for generalized data structure 700 within the namespace of RDBMS 210. Owner data field 710 references unique owner identifier data field 310 as a foreign key. At least one other data field 730 is required. Other data field 730 contains data owned by the user or data owner indicated in owner data field 710. In one aspect, generalized data structure 700 includes optional workspace context data field 715. In another aspect, generalized data structure 700 is used to store all data within memory 104 that is owned by an entity represented in data owner list 205. Both element list 206 and element relations list 207 are specific examples of generalized data structure 700.

**Kindly change the paragraph starting page 37, line 15 and ending on page 38, line 2 to the following:**

In another aspect of the invention a method for automatically analyzing the content of one or more bills of material by component type is provided. This method permits analysis using different categorization schemes and at different levels of detail within each categorization scheme. For example, a user can query the database to calculate the cost subtotals by category for all components contained in a bill of materials at any level in the categorization tree. A product manager can

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look at the subtotals at the top level of the tree in order to understand how the product cost was divided between electrical and mechanical components. An electrical engineer can look at the subtotals for only the electrical sub-categories to see how the product cost was divided between passive components, active components, and connectors. A salesperson can develop a completely different categorization scheme based on target markets and use it to analyze product offerings by target market. The owner of system 100 can develop a categorization scheme that is independent of any user's schemes and employ the independent scheme to guide the placement of targeted advertising.

Replace "data fields 530" with "other data fields 630" pg 21 line 1

*In the claims:*

Kindly delete claims 1-3.

Kindly add the following claims 4-23:

4. A method for managing a plurality of bills of material (BOMs) comprising:  
storing the plurality of BOMs in a processing system, each BOM describable as a tree with each node an element, each element in each BOM associated with an owner of a set of owners, each BOM associated with an owner of the set of owners,  
  
such that BOMS associated with different owners are stored in the same processing system.
5. A method as recited in claim 4, wherein at least one of the BOMs includes confidential information of the owner of the BOM such that that unrestricted access to the confidential information is limited to the owner and any designates of the owner of the BOM.
6. A method as recited in claim 5, wherein the BOMs are stored remotely, and wherein access to the BOMs is provided remotely.
7. A method as recited in claim 4, wherein the storing of the BOMs includes:  
storing one or more data structures in the processing system for storing the plurality of BOMs,  
  
the method further comprising:  
storing a list of elements in the a processing system, each element in the list of elements having a unique element identifier, each element in each BOM being one of the elements in the list of elements,  
  
such that the list of elements and the one or more data structures are part of a database stored in the same processing system.
8. A method as recited in claim 7, further comprising:

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providing unrestricted access to any confidential information in a particular stored BOM only to the owner associated with the particular BOM and to none or more designates of the owner.

9. A method as recited in claim 4, wherein each of one or more elements in the element list is associated with a respective owner of the set of owners, and wherein the list of elements includes an indication of ownership for each element associated with one of the owners, the method further comprising:
  - restricting access to information about a particular element in the element list that is associated with a particular owner to the particular owner and none or more designates of the particular owner.
10. A method for managing a plurality of bills of material (BOMs) comprising:
  - storing a database in a processing system, the database including:
    - a list of elements, each element having a unique identifier, one or more elements of the list of elements being for inclusion in one or more of the plurality of BOMs; and
    - one or more data structures for storing the plurality of BOMs, each BOM describable as a tree with each node an element of the list of elements, each element in each BOM associated with an owner of a set of owners, each BOM associated with an owner of the set of owners,
  - providing remote access to one or more elements of information in the database to one or more users,

such that the database may contain two BOMS associated with two different owners.
11. A method as recited in claim 10, wherein at least one of the BOMs includes confidential information of the owner of the BOM such that that unrestricted access to the confidential information is limited to the owner and any designates of the owner of the BOM.
12. A method as recited in claim 10, wherein each of one or more elements in the element list is associated with a respective owner of the set of owners, and wherein the list of elements includes an indication of ownership for each element associated with one of the owners, the method further comprising:
  - restricting access to information about a particular element in the element list that is associated with a particular owner to the particular owner and none or more designates of the particular owner.
13. A method as recited in claim 11, wherein a first BOM of a first owner may share one or more elements of the list of elements with a second BOM of a second owner.
14. A method for managing a plurality of bills of material (BOMs) comprising:
  - storing a database in a processing system, the database including:

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a list of elements, each element having a unique identifier, one or more of the elements being for inclusion in at least one of the BOMs; and

one or more BOM data structures for storing the plurality of BOMs, each BOM describable as a tree with each node an element of the list of elements and each branch of the tree defining a parent-child relationship, the one or more BOM data structures storing information on the parent-child relationships of the plurality of BOMs, each BOM associated with an owner of a set of owners,

providing remote access to one or more elements of information in the database to one or more users,

such that the database may contain BOMS having different owners.

15. A method as recited in claim 14, wherein the database includes confidential information of at least one of the owners such that that unrestricted access to the confidential information is limited to the owner and any designates of the owner.
16. A method as recited in claim 15, wherein the confidential information of an owner that owns a BOM in the stored plurality includes confidential information in the BOM of the owner.
17. A method as recited in claim 15, wherein providing remote access includes providing remote access via a public network.
18. A method as recited in claim 17, wherein the public network is the Internet.
19. A method as recited in claim 15, wherein each of one or more elements in the element list is associated with a respective owner of the set of owners, and wherein the list of elements includes an indication of ownership for each element associated with one of the owners, and wherein the confidential information of an owner that owns a element in the list of elements includes confidential information in the list of elements such unrestricted access to confidential information about a particular element in the element list that is associated with a particular owner is limited to the particular owner and none or more designates of the particular owner.
20. A method as recited in claim 15, wherein a first BOM of a first owner may share one or more elements of the list of elements with a second BOM of a second owner.
21. A method as recited in claim 14, wherein each element in the element list is one the set consisting of a physical element and a process, wherein the physical element may itself be a BOM and wherein the process that may reference a set of steps or operations.
22. A method as recited in claim 14, wherein each BOM data structure is for storing the parent-child relationships for at least one BOM of the plurality of BOMs, and wherein a BOM data structure includes, for a particular BOM, an entry for each element in the

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particular BOM, said element entry including a reference to the element's entry in the list of elements, an entry indicating the owner, and an entry indicating any child of the element in the case the element has a child in the tree representing the particular BOM.

23. A method as recited in claim 22, wherein the parent child relations for all the BOMS are stored in a single BOM data structure.